

### REMARKS

Subsequent to entry of this amendment, Claims 1, 3, 5, 6, and 26-30 are pending in this application. Claims 1-6 and 26-30 are rejected. Claims 2, 4, and 7-25 have been canceled.

The rejection of Claims 1, 2, 5, and 29 under 35 U.S.C. § 112 is respectfully traversed. Specifically, for consistency with Claim 1, Claim 2 has been canceled.

With respect to Claims 5 and 29, Applicant respectfully submits that one of ordinary skill in the art would understand the term “permissive” as it is used in the limitations of Claims 5 and 29 and has used in the context of the specification. More specifically, Applicant submits that the term “permissive” is a term of art that is commonly used in describing the operation of a nuclear power plant system. Moreover, The Federal Circuit has opined in *Verve LLC v. Crane Cams, Inc.*, 65 USPQ 2d 1051, 1053-1054 (Fed. Cir. 2002), that “[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field.” In the present case, Applicant respectfully submits that the specification is complete and that one skilled in the art would understand the operation of the system after the verification of the permissives.

In addition, as is well known, “resolution of any ambiguity may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention” such that the determining factor regarding the meaning of a term, is “how the phrase would be understood by persons experienced in the field...upon reading the patent documents.” Specifically, Applicant respectfully submits that an artisan of ordinary skill in the art would recognize the term “permissive” as it pertains to the operation of a nuclear power plant. Accordingly, for at least the reasons set forth above, Applicant requests the Section 112, second paragraph, rejections of Claims 1, 2, 5, and 29 be withdrawn.

The rejection of Claims 1-5 and 26-29 under 35 U.S.C. § 102(b) as being anticipated by the admitted prior art within the specification is respectfully traversed.

Applicant’s admitted prior art (AAPA) describes an essential requirement of a nuclear reactor protection system during abnormal system operation. More specifically, during

abnormal system operations, at least some known nuclear facilities include a shut-down system or a safe operation system which may automatically effect remedial action, such as repositioning the reactor valve alignment from a normal operating mode to an emergency operating mode, to facilitate preventing an unsafe or potentially unsafe condition. After the unsafe conditions have been resolved, systems are returned to a standby mode, wherein an operator manually aligns and visually verifies the reactor for other operating system modes. Notably, AAPA does not describe nor suggest automatically switching from a first normal operating mode to a second normal operating mode.

Claim 1, as amended, recites a method for operating a system that is operable in a plurality of normal operating modes that each include interlocks between the modes, wherein the method comprises “operating the system in a first normal operating mode...the first normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps...automatically switching the system to a second normal operating mode without going to a standby mode...the second normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps different than the first mode, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode.”

Applicant’s admitted prior art does not describe nor suggest a method for operating a system wherein the method includes operating the system in a first *normal* operating mode and then automatically switching the system to a second *normal* operating mode without going to a standby mode. Rather, in contrast to the present invention, Applicant’s admitted prior art describes switching the operation of the system during abnormal system operations, and also describes that once abnormal operations have ceased, the system is initially returned to a standby mode, prior to returning to a normal operating mode. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over the Applicant’s admitted prior art.

Claims 2 and 4 have been canceled. Claims 3 and 5 depend directly from independent Claim 1. When the recitations of Claims 3 and 5 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 3 and 5 likewise are patentable over the Applicant’s admitted prior art.

Claim 26 recites a method for operating a nuclear power plant system that is operable in a plurality of normal operating modes that each include interlocks between the modes, wherein the method comprises “operating the system in a first normal operating mode....automatically switching the system to a second normal operating mode without going to a standby mode...the second normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps different than the first mode, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode.”

Applicant’s admitted prior art does not describe nor suggest a method for operating a system wherein the method includes operating the system in a first *normal* operating mode and then automatically switching the system to a second *normal* operating mode without going to a standby mode. Rather, in contrast to the present invention, Applicant’s admitted prior art describes switching the operation of the system during abnormal system operations, and also describes that once abnormal operations have ceased, the system is initially returned to a standby mode, prior to returning to a normal operating mode. Accordingly, for at least the reasons set forth above, Claim 26 is submitted to be patentable over the Applicant’s admitted prior art.

Claims 27-29 depend directly from independent Claim 26. When the recitations of Claims 27-29 are considered in combination with the recitations of Claim 26, Applicant submits that dependent Claims 27-29 likewise are patentable over the Applicant’s admitted prior art.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 1-5 and 26-29 be withdrawn.

The rejection of Claims 1-6 and 26-30 under 35 U.S.C. § 102(b) as being anticipated by Hench et al. (U.S. Pat. No. 4,421,716) is respectfully traversed.

Hench et al. describe a Boiling Water Reactor (BWR) nuclear power plant that includes a safety monitoring system that provides summary information from a plurality of operating systems to an operator (Col. 3, lines 40-44). The safety monitor is operational at all times, but **is not** intended for use during normal operation of the plant (Col. 3, lines 58-60).

Rather, during normal system operations, the safety monitor operates in standby mode, (Col. 10, lines 15-16), during which a plurality of pushbuttons (1-6) may be selectively activated to selectively view a system status and/or graphical trend displays (Col. 4, lines 30-32). Although the safety monitor displays abnormal conditions, the system safety monitor does not change the operations of the plant, but rather the safety monitor may automatically change from displaying one status to that of another status during non-normal operations. (Col. 4, lines 30-35). For example, the primary output (graphical trend displays) is displayed unless an operator selects a secondary output by pushing a button associated with that display, wherein the secondary display is displayed as long as the button is depressed. A CRT screen (9) automatically reverts to the primary display when the button is released (Col. 10, lines 6-12). Hench et al. also describe that the messages received by the safety monitor alert an operator so that the operator can confirm the incorrect alignment and take proper corrective action.

Notably, Hench et al. do not describe nor suggest automatically switching a system to a second mode without going to a standby mode, wherein during the second normal operating mode, a predetermined configuration of valves, dampers, motors, and pumps different than a predetermined configuration of valves, dampers, motors, and pumps different than those within the first mode is established, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode.

Moreover, Claim 1, as amended, recites a method for operating a system that is operable in a plurality of normal operating modes that each include interlocks between the modes, wherein the method comprises “operating the system in a first normal operating mode...the first normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps...automatically switching the system to a second normal operating mode without going to a standby mode...the second normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps different than the first mode, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode.”

Hench et al. do not describe nor suggest a method for operating a system wherein the method includes operating the system in a first normal operating mode and then

automatically switching the system to a second normal operating mode without going to a standby mode. Rather, in contrast to the present invention, Hench et al. describe a safety monitor that is operable in a standby mode during normal operations to provide summary information regarding a plurality of operating systems. Hench et al. also describe that “a primary object of the invention is to provide an apparatus for monitoring critical systems of a nuclear plant.” Moreover, Hench et al. do not describe nor suggest automatically switching a system from a first normal operating mode to a second normal operating mode without going to a standby mode, wherein during the second normal operating mode, a predetermined configuration of valves, dampers, motors, and pumps different than a predetermined configuration of valves, dampers, motors, and pumps different than those within the first mode is established, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode. Accordingly, for at least the reasons set forth above, Applicant respectfully submits that Claim 1 is patentable over Hench et al.

Claims 2 and 4 have been canceled. Claims 3, 5, and 6 depend directly from independent Claim 1. When the recitations of Claims 3, 5, and 6 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 3, 5, and 6 likewise are patentable over the Applicant’s admitted prior art.

Claim 26 recites a method for operating a nuclear power plant system that is operable in a plurality of normal operating modes that each include interlocks between the modes, wherein the method comprises “operating the system in a first normal operating mode....automatically switching the system to a second normal operating mode without going to a standby mode...the second normal operating mode comprising a predetermined configuration of valves, dampers, motors, and pumps different than the first mode, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode.”

Hench et al. do not describe nor suggest a method for operating a nuclear power plant system wherein the method includes operating the system in a first normal operating mode and then automatically switching the system to a second normal operating mode without going to a standby mode. Rather, in contrast to the present invention, Hench et al. describe a

safety monitor that is operable in a standby mode during normal operations to provide summary information regarding a plurality of operating systems. Hench et al. also describe that “a primary object of the invention is to provide an apparatus for monitoring critical systems of a nuclear plant.” Moreover, Hench et al. do not describe nor suggest automatically switching a system from a first normal operating mode to a second normal operating mode without going to a standby mode, wherein during the second normal operating mode, a predetermined configuration of valves, dampers, motors, and pumps different than a predetermined configuration of valves, dampers, motors, and pumps different than those within the first mode is established, and wherein at least one of the valves, dampers, motors, or pumps is positioned to a different operating position than that respective valve, damper, motor, or pump was positioned for operation during the first normal operating mode. Accordingly, for at least the reasons set forth above, Applicant respectfully submits that Claim 26 is patentable over Hench et al.

Claims 27-30 depend directly from independent Claim 26. When the recitations of Claims 27-30 are considered in combination with the recitations of Claim 26, Applicant submits that dependent Claims 27-30 likewise are patentable over the Applicant’s admitted prior art.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 1-5 and 26-30 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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